

### **REMARKS**

This is a reply to the Final Office Action dated September 16, 2008, in the above-referenced patent application. Applicant thanks the Examiner for carefully considering the application.

#### **Status of Claims**

After this amendment, claims 1-16 remain pending. Claims 1, 5 and 10 are independent. Claims 1-15 are amended for clarification. No new matter is added. No further search and/or examination is needed.

#### **Rejections under 35 U.S.C. § 112, second paragraph**

Claim 4 is objected to as being in improper form under 37 CFR § 1.75(c). Applicant has amended claim 3 to overcome the 35 U.S.C. § 112, second paragraph objection.

Accordingly, withdrawal of the objection of claim 4 is respectfully requested.

#### **Rejections under 35 U.S.C. § 102(e)**

Claims 1-2 and 5-15 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Pub No. 2003/0235319 for Rass ("Rass"). This rejection is respectfully traversed.

Applicant's amended claim 1 requires "a method for achieving increased directivity in listening situations where at least one microphone is embedded in a first structure and at least one

microphone is embedded in a second structure, the first and the second structure being freely movable relative to each other to a distance corresponding to sound wavelengths at low frequency, the method comprising *conveying a microphone signal from one structure to a common processing unit for the microphone signals in the other structure and successively processing the signals for achieving a dynamic directional output based on the microphone input in both structures, wherein low-frequency directivity is enhanced by said processing*" (emphasis added). Applicant's amended claim 5 requires, in part, "[a] *microphone array for achieving increased dynamic directivity in listening situations,*" "a means for conveying signals from a first and second microphone, movable relative to each other "to a distance corresponding to sound wavelengths at low frequency," to a "common processing unit" ... wherein *low-frequency directivity is enhanced by said common processing unit*" (emphasis added; similar limitations are found in claim 10.). Claim 6 in turn clarifies that the movable nature of the structures allows optimization for directivity processing of signals below 1000 Hz. Such low frequency directivity processing is not possible by conventional hearing assist devices due to size limitations (see Background of the Invention).

Rass in contrast does not teach, disclose or suggest achieving dynamic directional output. Rass discloses that a specific directional characteristic can be set (Rass, par. [0040]). Further, Rass discloses that the signal processing is specifically adapted to a hearing situation, such as an automobile (Rass, par. 0033]). Distinguishable, Applicant's claimed invention does not require setting of directivity as the directivity is dynamic.

Moreover, in Rass, when the user leaves the hearing situation, e.g., automobile, the processor is also left behind in the automobile and the system goes into a normal hearing aid mode (see Rass, paragraph [0044]). Nothing in Rass is directed to using the distance between two sets of movable microphones to enhance dynamic directivity processing for low frequencies.

Further, the external processor in Rass is designed to be permanently located in a specific zone (e.g., a vehicle) and does not move with the user. Distinguishable, in Applicant's claimed invention of claim 10 the processor is with the user (i.e., in the hearing aid).

In view of the above, Rass fails to disclose all of the limitations of independent claims 1, 5 and 10 of the present application.

According to MPEP §2131,

'[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.' (Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)). 'The identical invention must be shown in as complete detail as is contained in the ... claim.' (Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989)). The elements must be arranged as required by the claim, but this is not an ipsissimis verbis test, i.e., identity of terminology is not required. (In re Bond, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990)).

Therefore, Applicant respectfully asserts that a *prima facie* rejection under 35 U.S.C. § 102(e) has not been adequately set forth relative to Rass. Thus, independent claims 1, 5 and 10 are patentable over Rass for at least the reasons set forth above. Additionally, the

claims that directly or indirectly depend on amended claims 1, 5 and 10, namely claims 2, 6-9, and 11-15, respectively, are allowable for at least the same reasons.

Accordingly, withdrawal of the rejection of claims 1-2 and 4-15 is respectfully requested.

Additionally, new claim 16 requires, in part, “the first structure further includes a plurality of microphones, where *each of the plurality of microphones in the first structure has an individualized preamplifier*” (emphasis added). Rass discloses three microphones (11A, 11B, 11C) connected to a single pre-processing unit 12, which is connected to single signal processing unit 13 disposed in external processor unit 1. The only mention of amplification in Rass is recited in paragraph [0021], as follows:

[a] hearing aid also usually comprises *a signal processing unit for the processing and frequency-dependent amplification* of the electrical signal. What is preferably a digital signal processor (DSP) serves for the signal processing in the hearing aid, its functioning capable of being influenced with programs or parameters that can be transmitted into the hearing aid. (Emphasis added).

Distinguishable, Applicant’s claimed invention requires *individualized pre-amplifiers* for each microphone in the first structure. Therefore, new claim 16 is patentable over Rass for at least these reasons.

### **Rejections under 35 U.S.C. § 103**

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rass in view of U.S. Patent No. 7,020,291 issued to Buck et al. (“Buck”). This rejection is respectfully traversed.

According to MPEP §2142

[t]he key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1396 (2007) noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Federal Circuit has stated that ‘rejections on obviousness cannot be sustained with mere conclusory statements; instead there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.’ *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006). See also *KSR*, 82 USPQ2d at 1396 (quoting Federal Circuit statement with approval).

Further, according to MPEP §2143, “[T]he Supreme Court in *KSR International Co. v. Teleflex, Inc.*, 82 USPQ2d 1395-1397 (2007) identified a number of rationales to support a conclusion of obviousness which are consistent with the proper “functional approach” to the determination of obviousness as laid down in *Graham*.” And, according to MPEP §2143.01, [o]bviousness can be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so. *In re Kahn*, 78 USPQ2d 1329, 1335 (Fed. Cir. 2006). Further, “[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the results would have been predictable to one of ordinary skill in the art.” *KSR International Co. v. Teleflex, Inc.*, 82 USPQ2d 1385, 1396 (2007). Additionally, according to MPEP §2143

[a] statement that modification of the prior art to meet the claimed invention would have been “well within the ordinary skill of the art at the time the claimed invention was made” because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish *prima facie*

case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Pat. App. & Inter. 1993).

Claim 3 requires, in part, “the microphone signal of the one structure is amplified, attenuated, low-pass filtered and/or phase shifted to optimise the *dynamic* directivity” (emphasis added). As asserted above, Rass does not teach, disclose or suggest dynamic directivity since a specific directional characteristic must be set (see e.g., Rass, pars. [0037] and [0040]).

Buck is relied on for disclosing signals are attenuated and low-pass filtered. Buck, however, does not teach, disclose or suggest “the microphone signal of the one structure is amplified, attenuated, low-pass filtered and/or phase shifted to optimise the *dynamic* directivity” (emphasis added), as required by claim 3.

Further the assertions made in the Office Action on pages 6-7 that support the conclusion of obviousness are not explicit and the basic requirements of an articulated *rationale* under MPEP 2143 cannot be found. This in combination with the lack of a specific reference makes a rebuttal by Applicant impossible and a *prima facie* case of obviousness has not been made.

Finally, Applicant’s claim 3 directly depends on independent claim 1. As discussed above, Rass does not teach, disclose or suggest the limitations contained in independent claim 1. Similarly with respect to Rass, Buck does not teach, disclose or suggest independent claim 1 limitations of “conveying a microphone signal from one structure to a common processing unit

for the microphone signals in the other structure and *successively processing the signals for achieving a dynamic directional output based on the microphone input in both structures, wherein low-frequency directivity is enhanced by said processing*” (emphasis added). Since neither Rass, Buck, and therefore, nor the combination of the two, teach, disclose or suggest all the limitations of Applicant's claim 1, as listed above, Applicant's claim 1 is not obvious over Rass even in view of Buck.

Accordingly, withdrawal of the rejection of claim 3 is respectfully requested.

**CONCLUSION**

In view of the foregoing amendments and remarks, Applicant believes that the claims are in condition for allowance. Reconsideration, re-examination, and allowance of all claims are respectfully requested. If the Examiner feels that a telephone interview may help further the examination of the present application, the Examiner is encouraged to call the undersigned attorney or his associates at the telephone number listed below.

Respectfully submitted,

/SL/

---

Steven Laut  
Registration No. 47,736  
Myers Dawes Andras & Sherman, LLP  
19900 MacArthur Blvd., 11<sup>th</sup> Floor  
Irvine, CA 92612  
(949) 223-9600  
(949) 223-9610 – Fax  
USPTO Customer No.: 23386